

**WHAT IS CLAIMED IS:**

1. A method of exporting from a data processor emulation information including emulation control information and emulation data, comprising:

arranging the emulation information into information blocks;

5 outputting a sequence of the information blocks from the data processor via a plurality of terminals of the data processor; and

said arranging step including providing some of the information blocks of the sequence with relative proportions of emulation control information and emulation data that differ from the relative proportions of emulation control information and emulation data in other blocks of the sequence.

2. The method of Claim 1, wherein the emulation control information in one of the information blocks includes information which identifies data in said one information block.

3. The method of Claim 1, wherein the emulation control information in one of the information blocks includes information that identifies data in an information block other than said one information block.

4. The method of Claim 3, wherein the emulation control information in one of the information blocks includes a compression map.

5. The method of Claim 1, wherein the emulation data in one of the information blocks represents operations of a clock used by the data processor for performing data processing operations.

5 6. The method of Claim 1, wherein the relative proportions of emulation control information and emulation data in said some blocks are respectively 100% and 0%.

7. The method of Claim 1, wherein each of the information blocks is a packet  
10 of emulation information including emulation control information.

8. The method of Claim 1, wherein said the emulation control information in one of the information blocks includes a unique identifier which indicates that the corresponding data in said one information block is a portion of a larger unit of data  
15 which has another portion in another information block of the sequence.

9. The method of Claim 8, wherein said another information block is an earlier block in the sequence.

20 10. The method of Claim 1, wherein the emulation control information in one of the information blocks indicates that the data processor has executed a program branch.

11. The method of Claim 1, wherein the emulation control information in one of the information blocks includes information about a memory access that has been executed by the data processor.

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12. The method of Claim 1, wherein emulation control information in one information block of the sequence affects how emulation control information in another information block of the sequence is to be interpreted.

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13. An integrated circuit device, comprising:

a data processing portion for performing data processing operations;

an emulation information collector coupled to said data processing portion for receiving emulation data therefrom, said collector operable for arranging the emulation data and associated emulation control information into information blocks;

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a plurality of terminals coupled to said collector for permitting said collector to communicate with an emulation controller located externally of said integrated circuit device; and

said collector operable for providing to said terminals a sequence of said information blocks to be output to the emulation controller, said collector further operable for providing some of the information blocks of the sequence with relative proportions of emulation control information and emulation data that differ from the

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relative proportions of emulation control information and emulation data in other blocks of the sequence.

14. The device of Claim 13, wherein the emulation control information in one  
5 of the information blocks includes information which identifies data in said one information block.

15. The device of Claim 13, wherein the emulation control information in one  
10 of the information blocks includes information that identifies data in an information block other than said one information block.

16. The device of Claim 15, wherein the emulation control information in one  
of the information blocks includes a compression map.

17. The device of Claim 13, wherein the emulation data in one of the  
15 information blocks represents operations of a clock used by the data processor for performing data processing operations.

18. The device of Claim 13, wherein the relative proportions of emulation  
20 control information and emulation data in said some blocks are respectively 100% and 0%.

19. The device of Claim 13, wherein each of the information blocks is a packet of emulation information including emulation control information.

20. The device of Claim 13, wherein said the emulation control information in one of the information blocks includes a unique identifier which indicates that the corresponding data in said one information block is a portion of a larger unit of data which has another portion in another information block of the sequence.

21. The device of Claim 20, wherein said another information block is an earlier block in the sequence.

22. The device of Claim 13, wherein the emulation control information in one of the information blocks indicates that the data processor has executed a program branch.

23. The device of Claim 13, wherein the emulation control information in one of the information blocks includes information about a memory access that has been executed by the data processor.

24. The device of Claim 13, wherein emulation control information in one information block of the sequence affects how emulation control information in another information block of the sequence is to be interpreted.

25. A data processing system, comprising:

an integrated circuit, including a data processing portion for performing data processing operations;

an emulation controller located externally of said integrated circuit and  
5 coupled to said integrated circuit for controlling emulation operations of said integrated circuit;

said integrated circuit including an emulation information collector  
coupled to said data processing portion for receiving emulation data therefrom, said  
collector operable for arranging the emulation data and associated emulation control  
10 information into information blocks; and

said collector coupled to said emulation controller for permitting said  
collector to communicate with said emulation controller, said collector operable for  
outputting to said emulation controller a sequence of said information blocks, said  
collector further operable for providing some of the information blocks with relative  
15 proportions of emulation control information and emulation data that differ from the  
relative proportions of emulation control information and emulation data in other blocks  
of the sequence.

26. The system of Claim 25, including a man/machine interface coupled to  
20 said emulation controller for permitting a user to communicate with said emulation controller.

27. The system of Claim 26, wherein said man/machine interface is one of a tactile interface and a visual interface.

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